
IV. ENVIRONMENTAL IMPACT ANALYSIS
L. UTILITIES
2. WATER

This section describes the existing water supply, facilities, water use and consumption patterns at the project site. A water analysis report was prepared by Canyon Consulting (2003), which characterizes the supply and source of water, the infrastructure currently serving the project site and the impacts of the proposed project on water supply and facilities. Future water demand resulting from the proposed project is calculated and mitigation measures are recommended where impacts have been deemed significant.

1. APPLICABLE PLANS AND POLICIES

The City of Huntington Beach General Plan was reviewed for applicable goals and policies developed for water utilities throughout the city. The following goal specifically applies to the proposed project:

U1: Provide a water supply system which is able to meet the projected water demands; upgrade deficient systems and expand water treatment, supply and distribution facilities; and pursue funding sources to reduce the costs of water provision in the City.

The following policies specifically apply to the proposed project:

U1.1.2: Approve and implement development in accordance with the standards identified in the Growth Management Element.

U1.2.1: Require that new and existing development contain safeguards and mitigation measures preventing degradation.

U1.2.2: Require new developments to connect to the sewer system.

U1.3.2: Continue to require the incorporation of water conservation features in the design of all new construction and site development.

U1.3.4: Require the use of reclaimed water for landscaped irrigation, grading, and other non-contact uses in the new developments, where available or expected to be available.

2. ENVIRONMENTAL SETTING

Water service within the City of Huntington Beach is provided by a municipal water system supported primarily by underground sources via nine (9) active wells, as well as imported water managed by the Municipal Water District of Orange County (MWDOC) via three (3) service connections. Groundwater pumped from the Orange County Groundwater Basin by the City of Huntington Beach is managed by Orange County Water District (OCWD). The City has the ability to pump groundwater from the basin as a member agency of OCWD, subject to payment of a Basin Production Percentage (BPP) fee. OCWD currently allows the City to pump groundwater up to 75 percent of the City's applicable water demand. In addition to the three (3) service connections to MWDOC, the City maintains emergency water connections with the Cities of Fountain Valley, Seal Beach, and Westminster, which could provide the City with limited water supply under emergency conditions.

Citywide, approximately 29 million gallons per day (mgd) of water were produced from the groundwater wells and 32 mgd of imported water was allocated in the year 2000.⁵⁵ For the years 1995 through 2000, imported water represented between 25-46 percent of total water production in the City. One additional groundwater well is presently under design that will result in a total of 10 potable water wells to help expand the City's groundwater capacity.

Water to the project site is conveyed via a few water lines located in the vicinity. Water is conveyed to Areas A and B1 of the project site via an existing 8-inch water line located in B Street. Area B1 is also serviced by an 8-inch water line that is located in A Street. A 6-inch water line currently serves Area B2. This line terminates at the eastern portion of the existing Bus Maintenance Facility and according to the City Public Work's Department, is in need of replacement.

3. ENVIRONMENTAL IMPACTS

a. Significance Threshold

A significant impact related to water supply and utility services would be identified if the proposed project is determined to:

- Be inconsistent with adopted plans or policies.

⁵⁵ *City of Huntington Beach Water Master Plan, December 2000.*

- Result in increased water demand such that the capacity of the existing water conveyance system is exceeded and that the construction of new facilities is required.

Result in insufficient water supply to be made available to the proposed project to meet its water demands.

b. Project Level Impacts

A Water Analysis Report was prepared by Canyon Consulting to assess the potential impacts to water supply and infrastructure associated with the proposed project. The complete report is included as Appendix I of the Draft EIR. Potential demand and effects to water resources and services resulting from the proposed project have been determined by applying water consumption factors or unit demand factors per unit area proposed. Table IV.L.2-1 on page 265 summarizes the proposed project's estimated water consumption demand utilizing these consumption factors.

Development of Area A associated with the proposed project would result in the average daily consumption of 19,652 gallons per day (gpd) or approximately 13.6 gallons per minute (gpm). Maximum day water demand is estimated to be 19.8 gpm (no irrigation) according to the City's peaking factor of 1.6 times the average day demand. The Existing Maximum Day Demand for the City of Huntington Beach is currently 34,718 gpm.⁵⁶ On an annual basis, the development proposed within Area A would require 22.01 acre-feet of water, in addition to the City's current total annual water use of 33,053 acre-feet.⁵⁷ The increase in water demand associated with development proposed in Area A is substantially less than one percent (0.067%) of the City's current water use. As described, the City receives its water from groundwater supplies as well as supplemental sources through the MWDOC, which would be able to accommodate this increase.

To satisfy anticipated growth, population increases and future development in the City, two new wells have been added and a third well is being designed for a total of three additional wells to increase its groundwater supply. It is estimated that upon completion of these wells, the City would be able to meet 115 percent of projected ultimate average-day and 71 percent of projected ultimate maximum day water demands. Water supplies by the City's three imported water connections would augment existing groundwater supplies and thus be able to sufficiently support future planned development within the City, including the proposed project. Huntington Beach will continue to seek opportunities to utilize recycled water, particularly for irrigation or industrial use, as supply and conveyance facilities become available. At this time, no facilities

⁵⁶ *Ibid.*

⁵⁷ *Ibid.*

Table IV.L.2-1

ESTIMATED WATER CONSUMPTION

| PROPOSED USE | PROPOSED AREA (square feet) | CONSUMPTION FACTOR (gallons/unit) | TOTAL CONSUMPTION (avg. gallons/day) |
|--|-----------------------------------|---|--|
| AREA A | | | |
| Commercial Retail (Lowe's HIW) | 159,300 | 50/1000 sf ¹ | 7,965 |
| Restaurant | 9,000 | 1100/1000 sf ² | 9,900 |
| Irrigation Use | - | 10% of total bldg demand | 1,787 |
| Subtotal Area A | | | 19,652 |
| AREA B1 | | | |
| Commercial/Retail | 57,000 | 230/1000 sf ³ | 13,110 |
| Restaurant | 4,200 | 1100/1000 sf ² | 4,620 |
| Office | 13,200 | 175/1000 sf ⁴ | 2,310 |
| Irrigation Use | - | 10% of total bldg demand | 2,004 |
| Subtotal Area B1 | | | 22,044 |
| TOTAL AREA A AND B1 CONSUMPTION | - | - | 41,696 |
| AREA B2 | | | |
| Public Facility (Bus Maintenance) | - | - | 2,989 ⁵ |
| Irrigation Use | | 10% of total bldg. demand | 299 |
| Subtotal Area B2 (No change to existing facility) | | | 3,288 |
| TOTAL PROJECT CONSUMPTION | | | 44,984 |

1 based on Storage Land Use Category, San Clemente Water Master Plan, 1994

2 based on Family Restaurant Category, San Clemente Water Master Plan, 1994

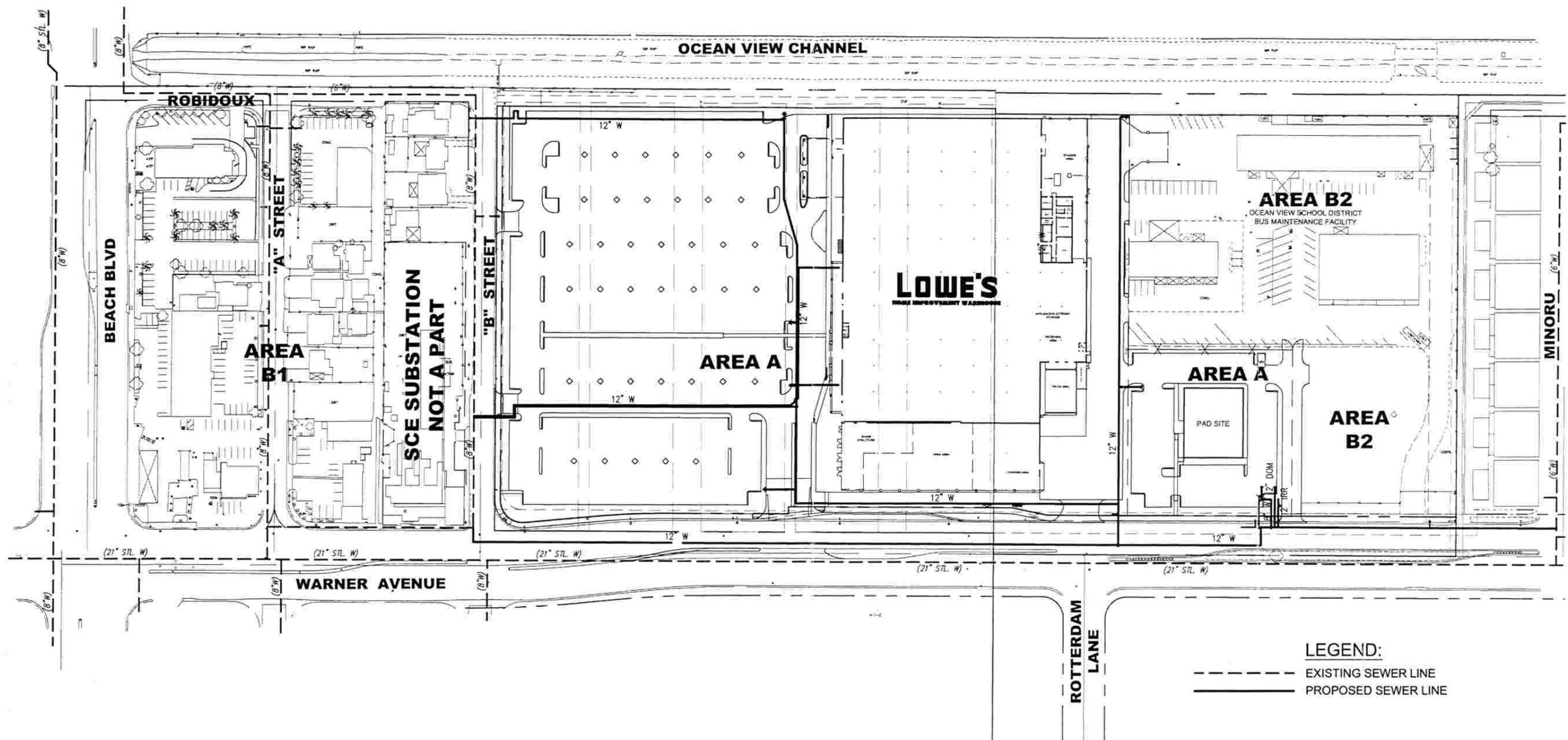
3 based on General Commercial Category, San Clemente Water Master Plan, 1994

4 based on General Office Category, San Clemente Water Master Plan, 1994

5 based on actual water usage from water bills

are available within reasonable distance to the proposed project; however, Huntington Beach will continue to conduct cost/benefit analysis for recycled projects in coordination with other agencies.

With regard to potential effects to the existing water distribution system, the project proposes a new water distribution system for Area A consisting of a new public 12-inch line in Warner Avenue extending to Minoru Lane where the 6-inch line originates as well as on-site 12-inch lines with appropriate valve and fire hydrant hook-ups. The proposed water system improvements for Area A are depicted on Figure IV.L.2-1 on page 266. A hydraulic analysis was conducted utilizing the existing City water system and proposed public and on-site water improvements associated with the proposed project to assess the proposed water distribution system. The analysis takes into consideration the fire flow requirements of the Lowe's retail building in Area A, which according to Uniform Fire Code, require the highest fire flow of 8,000 gpm for a duration of four hours. According to City fire officials, Area A would require an



ultimate fire flow of 3,000 gpm from three hydrants.⁵⁸ Several hydraulic simulations were conducted to determine residual pressure when flowing at 3,000 gpm from the three proposed on-site fire hydrants. Minimum residual pressure requirements set by the Fire Department were met. In the event that local water supplies were lost (i.e., wells and non-functional import connection), residual pressure at these fire hydrants would still meet minimum fire requirements.⁵⁹ Therefore, implementation of Area A would not result in significant impacts to existing water distribution facilities when considering on-site improvements to be implemented as part of the proposed project and implementation of Standard City Policies and Requirements.

c. Program Level Impacts

Though specific details associated with proposed development of Area B1 are not known at this time, general assumptions have been made about the types and amount of potential development that is to occur in this area. As such, preliminary projections of water consumption and use have been calculated as presented in Table IV.L.2-1 on page 265. Accordingly, Area B1 water demand is expected to be approximately 22,044 gpd or 15.3 gpm. On an annual basis, development proposed within Area B1 would demand 24.7 acre-feet in addition to the City's current annual water use of 33,053 acre-feet.⁶⁰ Increase in water demand associated with development to occur within Area B1 is substantially less than 1 percent (0.075%) of the City's current water use. As with Area A, the City's existing and planned future water supplies would be able to accommodate this increase in addition to other development plans in support of the City's anticipated growth.

As specific projects are developed and designed for Area B1, it is not anticipated that supplemental project specific CEQA analysis would be needed because impacts are considered less than significant.

No new development is proposed within Area B2 of the Project site at this time.

Additionally, as previously described, there currently exist water facilities that service Areas B1 and B2 including water lines in Beach Boulevard, Warner Avenue, B Street, Robidoux and Minoru. It can be reasonably assumed that these facilities would be maintained and that only on-site connecting lines would be needed; however, no new development is proposed for

⁵⁸ *Huntington Beach Fire Department, Letter from T. Greaves, February 10, 2003 (contained in Water Analysis Report prepared by Canyon Consulting, February 2003).*

⁵⁹ *Tetratech, Water System Analysis for Lowe's Development, September 30, 2002 (contained in Water Analysis Report prepared by Canyon Consulting, February 2003).*

⁶⁰ *Ibid.*

Areas B1 or B2 at this time. Necessary on-site infrastructure for development of Areas B1 or B2 would be constructed in the future at the applicant's expense.

As with Area A, a hydraulic analysis was conducted to evaluate the impact on existing water distribution facilities for Area B1. Without accurate or detailed plans for Area B1, the City Fire Department determined that the required fire flow would be 4,000 gpm. The analysis assumes that 4 hydrants would be proposed and available. According to the analysis and consistent with the assumptions made, minimum requirements for residual pressure would be exceeded and no significant impacts to water infrastructure is anticipated. Similarly, as with Area A, residual pressure at the assumed fire hydrants in Area B1 would still meet minimum fire requirements in the event that local water supplies were lost (i.e., wells and non-functional import connection).⁶¹ It should be noted that the design plans for Area B1 should incorporate at least 4 fire hydrants either from existing or proposed hydrants. Should fewer than 4 hydrants be available, subsequent hydraulic analysis for Area B1 at the project level would need to be conducted. Otherwise, impacts to water facilities is considered less than significant when considering the proposed improvements. Since no new development is proposed for Area B2, no impacts associated with that portion of the site would result. However, it has been recommended that the 6-inch water line in Warner Avenue serving area B2 should be replaced with a 12-inch water line extending to Minoru Lane.

4. CUMULATIVE IMPACTS

Development of Area A and Area B1 associated with the proposed project would cumulatively contribute to an increased demand for water. No new development is proposed within Area B2 at this time. The project site is located in a heavily built-out area that requires a certain amount of water to support its current activities. The proposed project would intensify the land use and demand more water than under existing conditions. However, given that the City has reliable import water supplies and is currently adding new wells, groundwater supplies are expected to increase to accommodate the future demand. As previously discussed, the City estimates that 115 percent of its projected average-day demand (including the proposed project and planned growth) and 71 percent of the projected ultimate maximum-day demand could be provided. The balance of the maximum day demand would be met by the City's existing import connections. Therefore, the proposed project at full build-out would not result in cumulatively considerable impacts to water supplies or facilities.

⁶¹ *Tetrattech, Water System Analysis for Lowe's Development, September 30, 2002 (contained in Lowe's Home Improvement Warehouse Huntington Beach Water Analysis Report prepared by Canyon Consulting, February 2003).*

5. STANDARD CITY POLICIES AND REQUIREMENTS

Compliance with existing State and City development requirements will ensure that adequate and sufficient water is supplied to the proposed project. Such requirements identified in the Water Analysis Report prepared by Canyon Consulting (refer to Appendix I of the Draft EIR) are as follows:

Prior to Issuance of Building Permits

1. Water improvement plans shall be submitted to and approved by the City Public Works and Fire Departments.
2. Water improvement plans for the construction of the 12-inch water main in Warner Avenue, shall be submitted to and approved by the City Public Works Department. The plans shall conform to the City's Water Division standards.
3. All new fire hydrants along Warner Avenue shall be connected to the new water distribution pipeline in Warner Avenue.
4. The on-site fire distribution system shall conform to all Water Division standards. Easements, which shall be provided for any onsite public distribution lines, shall be clear, unobstructed paved surfaces (no structures, planters, parking spaces, etc.) and shall be maintained on either side of any proposed on-site public line. Total width of the easements may vary between 10 feet and 20 feet, depending on the location.
5. Fire hydrants must be installed and be in service before combustible materials are delivered to the site. Improvement plans shall indicate all existing and proposed fire hydrant locations and fire department connections. The City Fire Department shall determine the number of fire hydrants and fire department connections.
6. The developer shall pay the Capital Facilities Charge and all applicable fees in accordance with the Huntington Beach Water Master Plan and City Council Resolution No. 6713.

6. LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Development within Areas A and B1 as proposed would not result in significant impacts to water supply or infrastructure provided all standard city policies and development requirements are met. Neither would development of Areas A or B1 result in cumulative water

supply impacts in conjunction with future planned projects in that the City is currently expanding its groundwater water supply capacity to meet 115 percent of its future planned development water needs.

7. MITIGATION MEASURES

No mitigation measures are necessary, as impacts related to water supply and facilities are less than significant.

8. LEVEL OF SIGNIFICANCE AFTER MITIGATION

No impact.